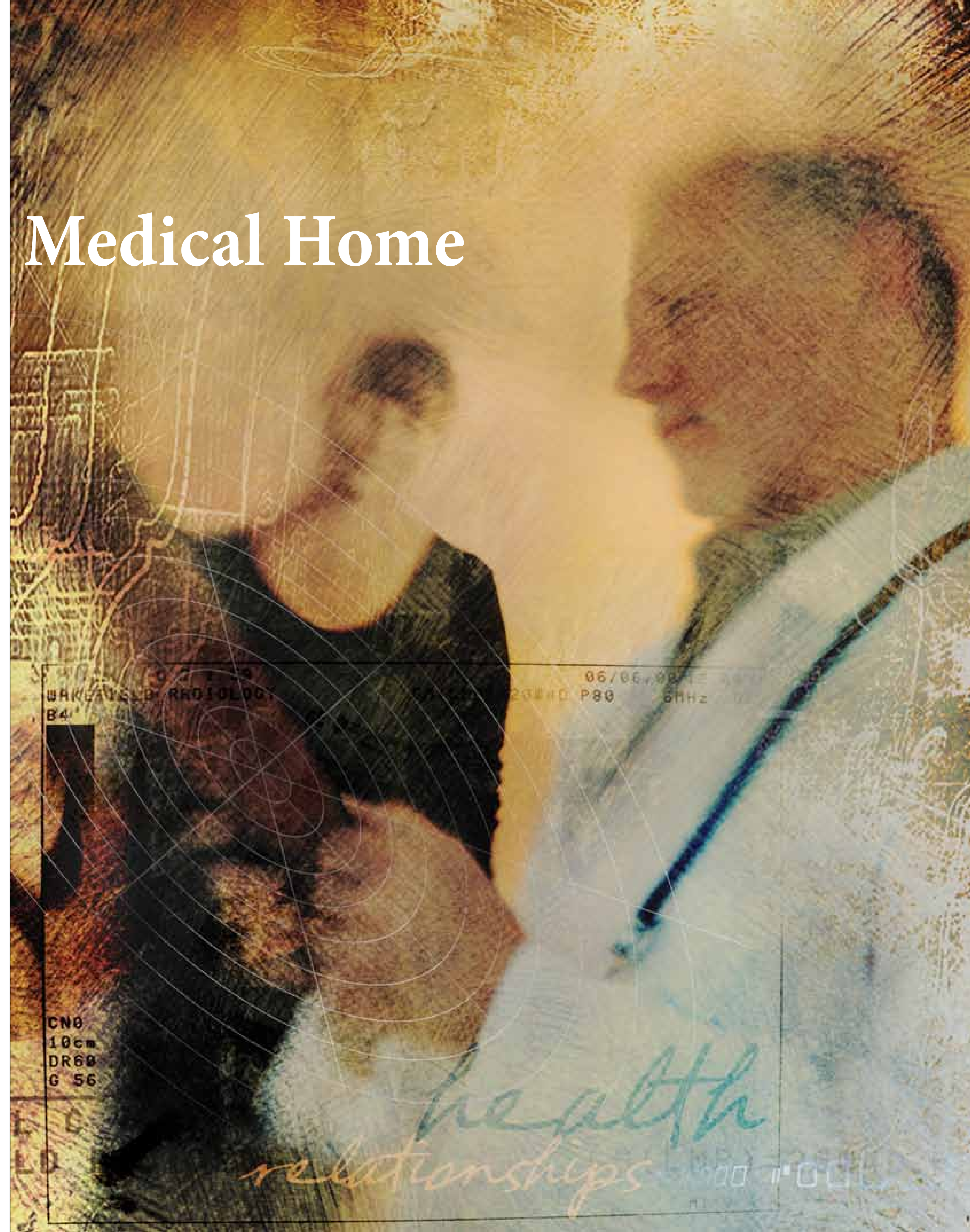
The Rewards and Challenges of Transforming Medicine:

The Patient-Centered Medical Home



A week before her regular diabetes visit, Mrs. Sutherland received a call from Dr. Snyder's office, reminding her about blood work the next day. The morning of the appointment, a nurse prepared a briefing memo about Mrs. Sutherland, listing the lab results the nurse had reviewed days earlier and noting changes along with recurring issues; in the exam room, she looked at Mrs. Sutherland's feet and talked at length about the patient's concerns, then added the information to the memo. Dr. Snyder spent just seconds scanning the note before greeting Mrs. Sutherland and spending 20 minutes covering medical issues only a physician could address.

Before leaving, Mrs. Sutherland stopped by reception to make sure the diabetes patient group would meet in a week and chatted with a nurse about a personalized handout she received. She stopped at her drugstore on the way home to pick up a prescription Dr. Snyder had sent electronically. Later, she e-mailed a question and got a reply within hours. In the meantime, the doctor dictated her notes for Mrs. Sutherland's file.

Mrs. Sutherland walked into the doctor's office at 9 a.m. and left at 9:40 a.m. Dr. Snyder ended the day knowing she had received a fair fee for the close attention she gave her patients.

Concept Holds Great Promise

"Patient-centered medical home" is one of the hottest concepts in clinical medicine today, touted as a partial panacea for the nation's troubled health system and a savior for the field of family practice.

As the hypothetical experiences of Mrs. Sutherland and Dr. Snyder show, the concept sounds ideal: Physicians spending time on what they love – complex medicine – not chasing down information or undertaking administrative responsibilities; patients enjoying a close relationship with their doctor and staying healthy through regular visits and tests, group sessions and community resources; and insurance companies, benefiting from fewer ER visits and hospitalizations, passing the savings on to clinicians.

Despite the enthusiasm, few empirical studies have been undertaken to prove advanced patient-centered medical homes save money in the long run; few, if any, practices have been able to implement the ideal; and critical changes in payment systems seem eons away. Still, scores of practices are participating in medical home projects or trying to adopt facets on their own because of the promise the concept holds.

A preliminary report on the first national demonstration project, sponsored by the American Academy of Family Physicians, praises the concept but also warns that "transformation to a PCMH requires epic whole-practice re-imagination." The report goes on to express concern that "current demonstration designs seriously underestimate the magnitude and time frame for the required changes, overestimate the readiness and expectations of information technology and are seriously undercapitalized."

George Valko, MD '86, medical director of the 70-physician Jefferson Family Medicine Associates, and Joseph Mambu, MD '73, who owns a three-physician practice in suburban Philadelphia, know the frustrations firsthand. Both are participating in a demonstration project sponsored by Pennsylvania and underwritten by insurance companies. Mambu's practice also was one of 36 in the national project, which ran from 2006 to 2008.

Noting the improved health of many patients, each says the benefits and the rewards outweigh the challenges.

"Even if the state or insurers don't see this as viable for them, I think we are going to continue it because it's so valuable to our patients and us," said Valko, who also serves as vice chair for clinical programs in JMC's Department of Family and Community Medicine. "It has clearly eased the burden for our physicians."

"This model promotes value over volume," said Mambu, who owns Family Medicine, Geriatrics and Wellness of Lower Gwynedd. "It is incredibly fun and fulfilling. This is why I went into primary care."

Evolving Over Decades

The concept "medical home" was first developed in 1967 by the American Academy of Pediatrics. The term originally involved little more than a central location for archiving a child's medical record.

During the next four decades, the concept evolved into the far more encompassing "advanced patient-centered medical home" requiring a radical shift from an authoritarian, physician-centered practice to teamwork; the recommended use of expensive and complex technology; new tactics to involve patients in their own care; and new systems to communicate with patients and to schedule.

"Most current practice models are designed to enhance physician workflow," the interim report about the first national project said. "The PCMH should be designed to enhance the patient experience. This shift requires a transformation, not an incremental change."

The American Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physicians and the American Osteopathic Association developed seven "Joint Principles of the Patient-Centered Medical Home" three years ago:

Personal physician: Each patient has an ongoing relationship with a personal physician trained to provide first contact, continuous and comprehensive care.

Physician-directed medical practice: The personal physician leads a team of individuals at the practice level who collectively take responsibility for the ongoing care of patients.

Whole-person orientation: The personal physician is responsible for providing for all the patient's healthcare needs or for taking responsibility for appropriately arranging care with other qualified professionals.

Care is coordinated and integrated through registries, information technology, health information exchanges and other means to assure that patients get the care they need in a culturally appropriate manner.

Quality and safety are assured by a care planning process, evidence-based medicine, clinical decision-support tools, performance measurement, active participation of patients in decision making, information technology, a voluntary recognition process and quality improvement activities.

Enhanced access to care is available not only through face-to-face visits but also via telephone, e-mail and other modes of communication. This involves establishment of "open access scheduling," a system that allows patients to get same-day appointments but also restricts their ability to make an appointment in advance.

Payment must "appropriately recognize the added value provided to patients who have a patient-centered medical home." For instance, payment should reflect the value of "work that falls outside of the face-to-face visit," should "support adoption and use of health information technology for quality improvement" and should "recognize case mix differences in the patient population being treated within the practice."

Requiring Radical Changes

Central to the approach is the premise that truly patient-centered care requires a fundamental shift in the relationship between patients and their primary care physicians, who must help their patients navigate a fragmented healthcare system by forging a much higher level of personalized care.

Physicians gain the time to develop a deep relationship with patients by assigning routine care to "team members" – physician assistants, nurses and even receptionists.

"The doctor isn't burdened when he sees the patient," Valko said. "Other members of the team have made sure the patient has undergone any tests that might be necessary. They've asked about all the routine information that we need to collect. After the exam, they make sure the patient understands his role in improving his health. It's enormous for physicians to enter an exam room knowing they will concentrate on what they went to school to learn."

As simple as developing teams might sound, no physician should underestimate the difficulty in changing the culture of a practice, Mambu said.

"I was already heading in the direction of developing a team approach, and it was still very difficult to give up the reins of power, to let other people treat my patients," he said. "This requires a lot of communication, and doctors don't usually have time to talk. This takes change in the organizational dynamics and in behaviors. This is transformational."

The transformation also takes staff. Mambu's practice, which cares for 3,500 patients, started with three people in 2001. Today, the staff includes three physicians and an advanced nurse practitioner plus 2.25 support people for each provider, far fewer than the industry recommended 3.5 but enough in the small office to implement the concept.

Valko's office, which as part of an academic medical center is far less flexible than Mambu's practice, has added a quality care coordinator and several lower-level staff members. Valko, the Gustave and Valla Amsterdam Professor of Family and Community Medicine, works closely with Richard Wender, MD, chair of the department, to assure proper staffing, but Jefferson Family and Community Medicine has not yet reached the number of team members needed to fully implement key aspects of the medical home, meaning physicians still undertake some routine care.

Tracking 'Populations'

Another fundamental aspect of today's medical home involves looking at patients from a "population-based approach" to identify and track those with chronic conditions. The three-year Pennsylvania project, which started in 2008, focuses on diabetes in southeastern Pennsylvania. Jefferson Family and Community Medicine and Mambu's office pull lists to monitor their diabetes patients, calling those due for appointments or tests while identifying others eligible for group education sessions.

"We have already demonstrated that we have improved outcomes, improved blood pressure control, improved rates of getting appropriate blood tests and screening," Valko said. "We have improved our ability to teach patients about their illnesses, to set goals, to recall patients. We won't know until the end of the project if this has translated into lower costs."

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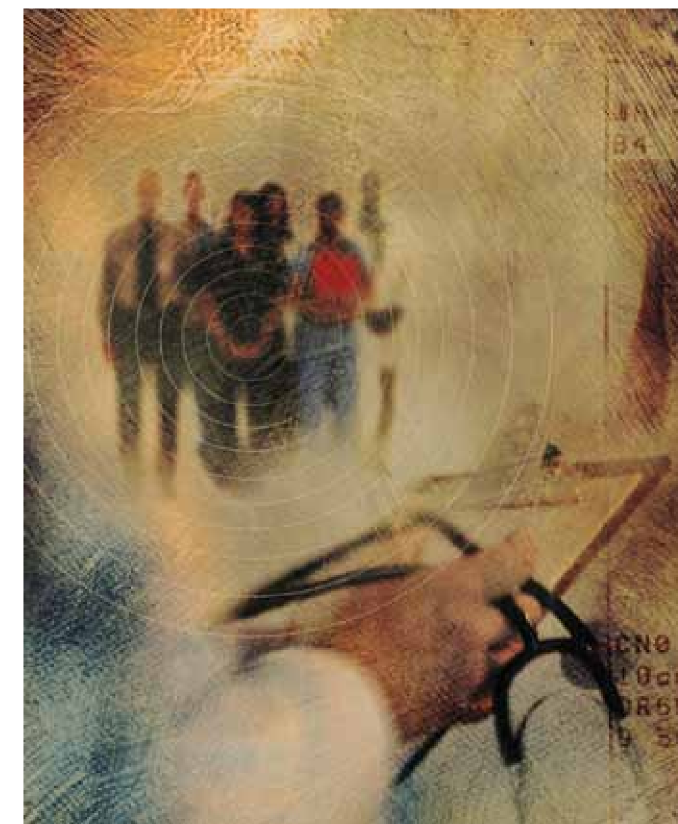


Valko and Mambu have extended the approach to include patients with hypertension and to incorporate preventive care. "The population-based approach has benefited all our patients," Valko said.

Shifting to Technology

Although the National Committee for Quality Assurance does not insist practices install an electronic records system for medical-home certification, many requirements would be virtually impossible to fulfill without it. Valko and Mambu consider it the most expensive and potentially most difficult single element to implement.

"This was a huge adjustment and a very expensive proposition," Valko said. "And the learning curve continues because new modules and enhancements come out all the time, requiring constant training."

Jefferson Family and Community Medicine purchased its system through the umbrella Jefferson University Physicians. Going with a central organization to implement the system offers advantages, including training, a help desk and the economy of scale. But it also has disadvantages – decisions must be made across all departments, so change comes more slowly. Valko was instrumental in the massive project of implementing the system for the entire organization.

Mambu and his staff, with the help of an adviser with the national project, sorted through the confusing array of systems

themselves before deciding on a vendor and beginning a year-long implementation process. He also trained a staff member as a "customizer" to help mold the system to his office's ever-changing needs. The system cost $150,000, an expense Mambu did not fully recoup until he joined the Pennsylvania project and began earning supplemental fees.

For his efforts, Mambu's office comes as close to the ideal of a medical home as almost any in the country.

Through personal portals, patients exchange e-mails with the doctors and staff, check on lab results, schedule appointments and ask for prescription renewals. Mambu sends prescriptions electronically. His computerized disease management system automatically notifies patients when they are overdue for an office visit or diagnostic test. He has consolidated and expanded his nursing home practice by using the system to organize and group visits. The office took over billing, reducing the cost from 11 percent to 2 percent of the practice.

Mambu tracks the office's effectiveness by analyzing reports the system produces. He also employs the online service Survey Monkey to track his patients' satisfaction, making improvements when trends surface.

If a patient calls in the middle of the night, Mambu merely fires up his laptop instead of driving to the office to check records.

Both Mambu and Valko look forward to establishing a system of "electronic visits" where patients with non-emergency conditions can go online and respond to a series of questions designed to help expedite their care. Valko envisions a day soon when a patient who becomes ill while traveling will have his entire medical record available on the Web through a HIPAA-secure portal.

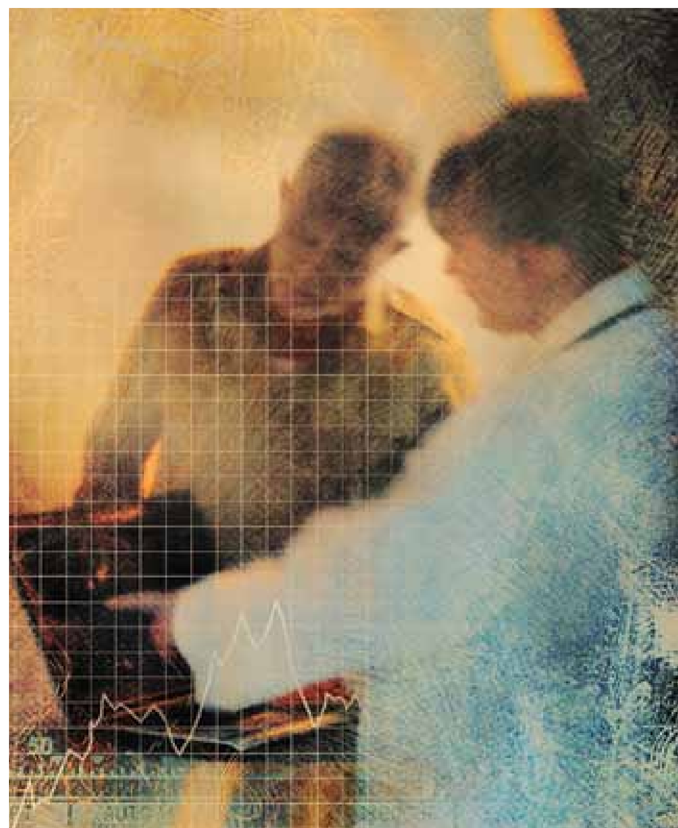
Who Will Pay?

"For a primary care practice, the medical home is a massive investment in time, personnel and money," Valko said. "Without additional payment, it would be hugely difficult. Something has to give."

Everyone in medicine agrees.

The medical home focuses on comprehensive care, including prevention and proactive intervention. Under today's insurance system, physicians see little reward for keeping patients healthy, no matter how time consuming or intensive the treatment.

Some evidence of savings exists but largely with projects employing primarily the Wagner Chronic Care Model and not the additional nuances of the medical home. The Chronic Care Model, developed by Drs. Ed Wagner and Michael von Korff at the MacColl Institute for Healthcare Innovation, emphasizes that improved outcomes are the product of an informed, motivated patient and a prepared, proactive healthcare team.



"The doctor-patient relationship was the reason I became a doctor. Getting to know your patients and having them trust you, having them listen to you, letting them truly understand that you will advocate for them, that's what you want to build. And that's what has been seriously damaged by this volume practice."

– Joseph Mambu, MD '73

The Community Care of North Carolina – which provides care for state residents without significant insurance coverage – reports saving at least $160 million per year by using the Chronic Care Model. An asthma program has reduced hospital admission rates by 40 percent and a diabetes program has improved quality of care by 15 percent.

The Pennsylvania project, which also relies heavily on the Chronic Care Model, was designed to quantify cost savings as well as track health results. The state was motivated to organize the project after calculating $4 billion in potentially avoidable hospitalizations in 2007 because of just four acute conditions. The program has enlisted 173 medical practices with 869 physicians throughout the state. As of July, the practices cared for 43,675 diabetics and 12,654 children with asthma, the primary focuses of the project.

In southeastern Pennsylvania, where the state project began, statistics from the first year show great promise: The number of diabetics with self-management goals increased 195 percent; the number of patients getting annual eye exams increased 71 percent; the number getting annual foot exams increased 142 percent; and the number of patients who lowered their cholesterol below 130 increased 43 percent.

With the hope of benefits translating into savings, the Pennsylvania project became the first in the country to gain the cooperation of all the major insurance companies operating in the state. The companies pay the practices supplemental fees of about 8 percent depending on a formula that includes the level of certification they have received from the National Committee for Quality Assurance. Mambu and Valko have received the highest certification, Level 3.

Valko's office has used the additional money to hire more staff members. Mambu also has used the money to pay off his electronic records system and to start a 401k for the office. Neither considers the fee large enough to offset the additional work and personnel required. And neither office has used the funds to increase the salaries of the primary care physicians, historically the lowest paid in medicine.

If the project shows significant savings for the insurance companies, Mambu questions whether primary care physicians will see fair fees.

"It's a scary time," he said. "Without the fees I would need to take a 10 percent cut in salary. And what about the people I hired to do this? What will happen to all the advances we've made?"

Mambu holds little faith in the federal government forcing changes in the fee system. He finds more hope in large corporations, weary of seeing insurance rates skyrocket, forming coalitions to support medical home practices. But, he said, he refuses to operate on hope alone: He and other physicians involved in the national project have been discussing a third alternative – forming a medical home network.

"We want to obtain nonprofit status so we can apply for grants to explore this model even further," he said. "We want to recruit other practices and help them implement the key components. We want to share economies of scale. And we want to collect outcome and cost data to force new payment methodologies."

What's At Stake?

George Valko sees nothing less than the future of family medicine – and the health of the nation – at stake. With research showing primary care providers playing a significant role in a patient's health, he and many others believe healthcare reform will rely heavily on family medicine. The field, with low pay and high frustration, has proved unattractive to students for years, creating a shortage of primary care physicians.

"A lot of times students see us running around, getting paid little, working 16-hour days and beating our heads against the wall for patients who seem to care little," Valko said. "That's a perception we don't want.

"We have the chance to show students that a primary care practice can work, that the patient-centered medical home brings more sanity to the office and you can concentrate on the fun part – taking care of the patient. As a nationally known teaching site, we need to lead in finding a better way." ■

For more information about patient-centered medical homes, visit the American Academy of Family Physicians at www.aafp.org; TransforMED (www.transformed.com), the for-profit subsidiary the academy founded to help practices transform into medical homes; www.pcpcc.net for the Patient-Centered Primary Care Collaborative; and www.NCQA.org for the National Committee for Quality Assurance. Visit www.improvingchroniccare.org for more information about the Wagner Chronic Care Model.